

## ABSTRACT OF THE DISCLOSURE

Prior to carrying out a gaseous phase chemical reaction, a liquid phase organic compound which is prone to degrade is vaporised at elevated pressures with the aid of a second compound. In one embodiment of the invention, vaporisation is effected by co-vaporising a mixture of the two compounds in a vaporiser. In another embodiment, the first compound is injected into a hot gaseous stream and undergoes atomisation into droplets which then vaporise within the gaseous stream. The second compound is used to assist the atomisation process and/or to sweep atomised droplets of the first compound away from hot surfaces where the first compound would otherwise tend to undergo degradation if the droplets are allowed to reside in contact with such surfaces.